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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/174,042	10/16/1998	JURGEN HIRATH	1997P10413 US	5077

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EXAMINER	
WILKENS, JANET MARIE	
ART UNIT	**PAPER NUMBER**
3637	

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/174,042	HIRATH ET AL.	
	Examiner	Art Unit	
	Janet M. Wilkens	3637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 15-30* is/are pending in the application.

4a) Of the above claim(s) *25-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 15-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Original Presentation

Newly submitted claims 25-30 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: they are drawn to a method/process for making a heat insulated wall (which is classified in class 428). Note: the original claims are drawn to an article/a heat insulated wall (which is classified in class 312).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 25-30 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03 and 706.07(h).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 20 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Namely, nowhere in the specification, as originally

filed, does it state that the pressure within the intermediate space of the wall is lower than atmospheric pressure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10 and 15-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al (4,444,821) in view of Schmidberger (German reference 1, 004,207). Young teaches a heat insulated wall (see Fig. 3) comprising: a connecting profile (20), an evacuable heat insulating material (30) and two outer metal/aluminum covering layers (10a,b). For claims 1 and 18, Young fails to teach a tube/stub with flatten outer flanges on the ends thereof between the outer covering layers of the wall. Schmidberger teaches a refrigerator (Fig. 1) having a tube (30) with integral flatten outer flanges located between its outer covering layers (12,10). Welds are located between the flanges and layers. The tube, along with openings in the layers, provide a conduit for wires, for a light, etc. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the wall of Young by adding a tube between its outer layers, as well as corresponding openings in the walls thereof, such as is taught by Schmidberger, for the advantages stated above. Furthermore, it would have been obvious to construct the tube's flanges so that they would compensate for

positional imprecisions between the apertures and the tube and permit the tube center to be offset from the apertures' centers a distance up to about 20 percent of the aperture diameter while maintaining a seal there between, so to maintain the vacuum within the wall. Note: it should be understood that the Schmidberger reference is being used only for its specific conduit teaching, other features of the Schmidberger refrigerator not forming a part of the combination. Also, it is being assumed that the pressure within the intermediate space of the layers of the vacuum panel of Young is inherently lower than atmospheric pressure (since Young teaches all of the structural limitations as claimed).

For claims 8-10, 22 and 23, Young in view of Schmidberger fails to specifically teach that the layers and tube are made out of corrosion-protected steel. The examiner takes Official notice that corrosion-protected steel is well known in the art. Therefore, it would have been an obvious design consideration to one of ordinary skill in the art at the time of the invention to modify the layers and tube of Young in view of Schmidberger by making the layers and tube out of any of a number of different materials, including corrosion-protected steel, depending on the desired need of the person constructing the layers/tube, e.g. depending on certain properties desired/required for the layers/tube, depending on the materials readily available, depending on economic considerations, etc. For claims 10 and 23, to connect the metal tube and layers, continuous welds could be used there between. This type of connection between metal layers is well known in the art (see disclosed specification second paragraph pages 1-2).

Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al (4,444,821) in view of Schmidberger (German reference 1, 004,207) as applied to claims 1-10 and 15-23 above, and further in view of Buchser (4,715,512). As stated above, Young in view of Schmidberger teaches the limitations stated above, including a tube with flanges inside a vacuum insulated wall. For claims 11 and 12, Young in view of Schmidberger fails to specifically teach that the layers and tube flanges have different thicknesses, i.e. the flange thickness being twice that of the layers. Buchser teaches tube flanges (21,25) which are twice as thick as the layers (11,12) to which they are attached (see Fig. 3). It would have been an obvious design consideration to one of ordinary skill in the art at the time of the invention to have the thicknesses of the layers and flanges different, such as is taught by Buchser, for strength purposes, reinforcement purposes (making area around openings stronger), etc.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Young et al (4,444,821) in view of Schmidberger (German reference 1, 004,207) as applied to claims 1-10 and 15-23 above, and further in view of Horvay (3,006,158). As stated above, Young in view of Schmidberger teaches the limitations stated above, including a vacuum insulated wall. For claim 24, Young in view of Schmidberger fails to teach a connection stub attached to an outer portion of one of the layers. Horvay teaches a connection stub (34) attached to an outer portion of one of the layers of an insulation wall via a flange. The stub allows for water drainage. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the wall of Young in

view of Schmidberger by adding a connection stub between its outer layers, as well as corresponding openings in the walls thereof, such as is taught by Horvay, for the advantage stated above. Furthermore, it would have been obvious to connect the stub flange and outer portion of one of the layers using welds for a vacuum-tight seal there between. This type of connection between members is well known in the art (see disclosed specification second paragraph pages 1-2).

Response to Arguments

Applicant's arguments filed November 2, 2005 have been fully considered but they are not persuasive.

It should first be noted that heat insulated walls with vacuum interiors are well known in the art, as shown by Young et al (as well as by other cited references). Furthermore, during this type of wall's construction, it would be obvious for one to attach the profiles/end connectors thereof, as well as any other feature, such as an interior tube, on the layers of the walls in such a manner so as to help keep the vacuum there within. The resulting wall being one where all members of the wall are in a "vacuum tight" relationship with one another. As stated in the field of the invention of the disclosed specification, welds are commonly used for this purpose. As for the applied references, Young teaches that the end strips 20 are sealably joined to each outer layer to define an evacuable internal volume (column 4, lines 39-41) and Schmidberger teaches that welds are located between the flanges and layers (page 9 of translation).

As for Schmidberger's refrigerator and parts thereof being made of plastic. As stated above, the Schmidberger reference is being used only for its specific conduit teaching, other features of the Schmidberger refrigerator not forming a part of the combination. Therefore, even though Schmidberger's refrigerator teaches away from using metal for its walls and therefore other features, this reference does teach the advantage of using a tube within an insulated wall, e.g. to provide a conduit for wires, for a light, etc. It is this teaching that is being applied in the art rejection. Furthermore, since the wall of Young is made of metal, it would then have been obvious to make a tube used therein the same material. Finally, an inherent advantage of having flanges of a tube as connecting members is that variations in such things such as aperture diameters can be easily compensated for using the length of the flanges for covering various sizes of openings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janet M. Wilkens whose telephone number is (571) 272-6869. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on (571) 272-6867. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Wilkens
March 2, 2006

JANET M. WILKENS
PRIMARY EXAMINER
AU 3637